A
MESSAGE FOR
COLLEGE AND
UNIVERSITY
PRESIDENTS

COLLEGE AND UNIVERSITY MUSEUMS

LAURENCE VAIL COLEMAN

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By

LAURENCE VAIL COLEMAN

Director of

The American Association

of Museums

THE AMERICAN ASSOCIATION OF MUSEUMS
WASHINGTON, D. C.
1942

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WASHINGTON, D.C.

WAVERLY PRESS, INC.
BALTIMORE, MD.

FOREWORD

THIS book is for presidents, and also for trustees, of American colleges and universities. Although it may hold something of interest for those who are in charge of museums, it is not a manual of museum methods. It is, rather, a report on the state of things, with recommendations as to what ought to be done in the light of experience.

Most of the material presented here comes from recent visits to more than 200 colleges and universities, but the general thesis rests also on years of observation. Campus museums of all kinds are considered, and even the smallest teaching collection is looked upon as a museum.

For support of inquiries and of the publication of this book I am indebted, both individually and on behalf of the American Association of Museums, to the Carnegie Corporation of New York and to its President, just retired, Dr. Frederick P. Keppel.

L. V. C.

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COLLEGE AND UNIVERSITY MUSEUMS

I

MUSEUMS IN THE CAMPUS SCHEME

Every college, every university, has museum problems. Some of these problems relate to collections, and come as often from having unwanted stuff as from not having things that are needed. Other problems relate to aims and support, and still others to people. Many an establishment is beset in all these ways.

Such difficulties spring from policies of the parent institution. If the museum policies are sound, they fix proper aims, look to reasonable support, and get the right people into this kind of work. Then collections take shape, and useful museums develop. However, plans must be more than sound to be effective. They must also be in force with the administration. Where museum work is left to anyone on the faculty who is willing to take responsibility for it, the results at best are insecure, and as a rule inadequate. But if the college or university president sees to it that things are going as they should with respect to museums, the results are rewarding.

Creditable museums are needed on every campus. In the fields of art and of biological and geological science, which are unneglectable in higher education, museum material is the only ground on which a large part of teaching and research can rest; and collections, together with fitting arrangements for their care and use, are essential. Other fields, especially history, make some use of museums; but art and natural science must have museums or there are bound to be gaps in the educational program.

In fact, art and science museum collections have functions as important as the functions of book collections, and in these fields good museums would probably be taken as much for granted as good libraries if the acquiring, care, and use of museum objects were as relatively uninvolved as the acquiring and management of books.

There need be no doubt about what to do on the campus in a museum way. Long experience in many places has shown the arrangements that work well and those that do not, and this experience is easily usable if museums are regarded realistically—as museums, and not as political, social, or some other kind of agencies, or as things to be ignored no matter what happens.

Good college and university museums are found, on the whole, in the good colleges and universities. There are constellations of great museums at half a dozen institutions, strong museums of art or science at scores of others, and excellent lesser, often very small, museums in hundreds of places. To be sure, not every one of the 700 campus museum units in the United States marks a progressive institution, but the 400 colleges and universities having these museums are, as a class, the top 400; and the institutions with no museums at all are, as a class, the backward colleges. Small institutions are as deeply concerned as large institutions. All colleges and universities, without exception, should take museums into their reckoning.

MUSEUMS FOR USE are the only museums worth while. On the campus the museum of art or science has a natural part in academic work, but some of the roles that college and university museums seem expected to play are, to say the least, out of character. A properly managed campus museum is not a gathering place for Alma Mater's windfalls. It is not a pacifier for alumni and friends who have made gifts, or a diversion for parents at commencement time. And it is not a token to the taxpayer or the legislator that one's heart is in the right place.

The campus museum should be, above all, an instrument of teaching or research, or of both.

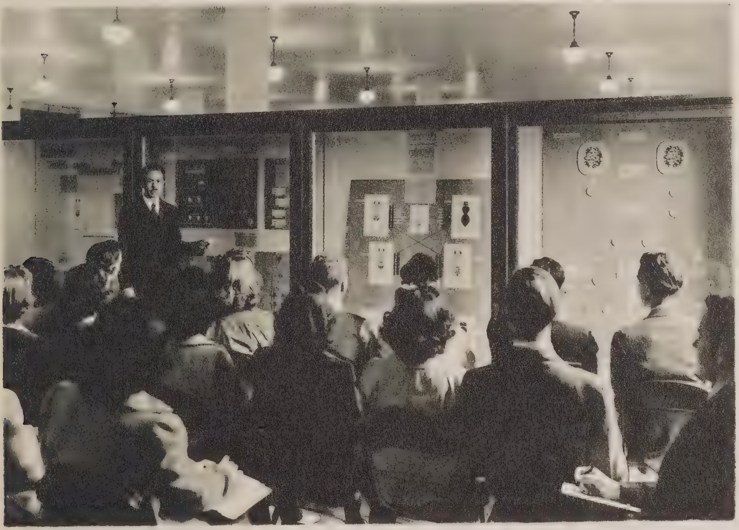
THE FIRST DUTY of a university or college museum is to its parent establishment, which means that the faculty and student body have a claim prior to that of townspeople and outsiders in general. Public service, including cooperation with schools and other work for children, is no more the first business of a college museum than of a college library. There are campus museums run by people interested wholly in the public, people whose enthusiasm for this kind of good work will listen to no question of whether their efforts are appropriate to the place in which they hold forth. There are campus museums, also, that try to be all things to all men; but unless such museums are conspicuously useful in their proper work—that is, work with students—they are inadequate, and no extenuating circumstance can alter that fact.

Public service is all right as a subordinate function if it can be rendered without prejudice to academic work. The presence of a sizable museum in a college has been known to forestall the founding of a public museum in town, and so the community may have a legitimate claim on the only museum within reach. An example of this is seen in the Lawrence Art Museum at Williamstown, which does its work for Williams College and also extends itself through exhibits and lectures to the people of Northern Berkshire. Where the parent institution is free from local taxation there may be reason on that score for giving the community all the attention the campus museum can spare. Thus at Yale the Peabody Museum of Natural History has a children's department working with New Haven public schools. But there need be no uncertainty as to what a college or university museum is for, primarily. Even though exhibits that relate to teaching and research are kept open to the public, and though elementary school classes are encouraged to come when they do not interfere with academic work, and though reference collections and files of photographs are made available to outsiders, and though lectures and recitals are open to townspeople, still the campus museum should not be run in the spirit of a public museum. All excursive efforts should be secondary to the main job.

On the other hand, a nearby public museum may automatically relieve a college or university museum of some responsibility it would otherwise have toward academic work, especially in regard to making a large collection. But in any case there is need for a museum program of some kind on the campus. The student must invariably have some material close at hand, and, as we shall see, the student community on the campus needs museum ministration of a different kind from what a public museum would offer.

In several states the state university has the state museum within its confines, which arrangement has possibilities for both good and ill. The principal advantage is in the realm of economy. The danger comes from the ease of confusing functions of the university

A STUDENTS' WORKPLACE CLASSICAL MUSEUM, VASSAR COLLEGE



TEACHING IN THE UNIVERSITY MUSEUMS UNIVERSITY OF MICHIGAN

museum with functions of the state museum. A state museum is supposed to be the leader of museum work in the state; it should be active in starting museums where they are needed, fostering work of local museums, administering historic sites and museums in state parks, preserving the state's scientific, historic, and perhaps artistic record, getting up exhibits for the general public, and lending collections to schools. A university museum has no such duties as these, and even the museum of a state university—even that of a state university which spreads its influence widely over the commonwealth—has no warrant for trying to attract everybody in the name of adult education. Those who argue for such efforts outside the museum's sphere may say that the museum of a state university should back up its parent institution and return what it can to taxpayers of the state. So it should; but its duty in this respect is through tax-supported higher education—a duty that has to be discharged on the campus as a part of the regular work on behalf of students.

In a section of the country where the state university may be practically the only cultural leader, the functions of local public museum, state museum, and university museum may have to be closely interwoven for a time. But this phase will pass as rapidly as the section grows up; and meanwhile a clear understanding of what is involved will help to develop separate institutions for divergent tasks.

SMALL AND LARGE MUSEUMS are equally necessary on the campus. There is a common inclination among college and university people to think of small departmental collections as out of the museum category. One often hears it said that an institution has no museum, or that its museums are not active "in the usual way," when the fact is only that collections are small, that no museum building has been provided, or perhaps that there are no exhibits for the public. Here lies a misapprehension. Academic work has need for different kinds of museums, some large, some quite small and informal. A useful little teaching collection or exhibit need not be looked upon as, at best, the beginning of something greater. It may be a very worthy museum just as it stands.

Nearly all universities and many colleges have several museum units apiece—there being 700 units among 400 institutions. Less than 50 of these museums have buildings of their own and comparatively few others are large enough to need such buildings; but there are hundreds of little museums occupying rooms or lesser spaces.

HOW MANY MUSEUM UNITS there should be on any campus depends upon the size of the institution and upon how the departments concerned with museums are distributed. So many different arrangements have grown up in different places that one is likely to think of this question as more involved than it really is. But, whatever the problems, one thing is very plain: to have a single general museum embracing both art and science, and perhaps history, is a mistake.

The trouble with one all-inclusive museum is that its collections fail to develop, as they should, in the hands of the different faculty groups that should be responsible. A college or university art collection is by nature an in-timate part of the fine arts department or school, and science collections are parts of the science set-up. One might as well put the laboratories of the biology, physics, and chemistry departments into one common laboratory building as to house art and science collections in a common museum building away from their natural places of growth and use.

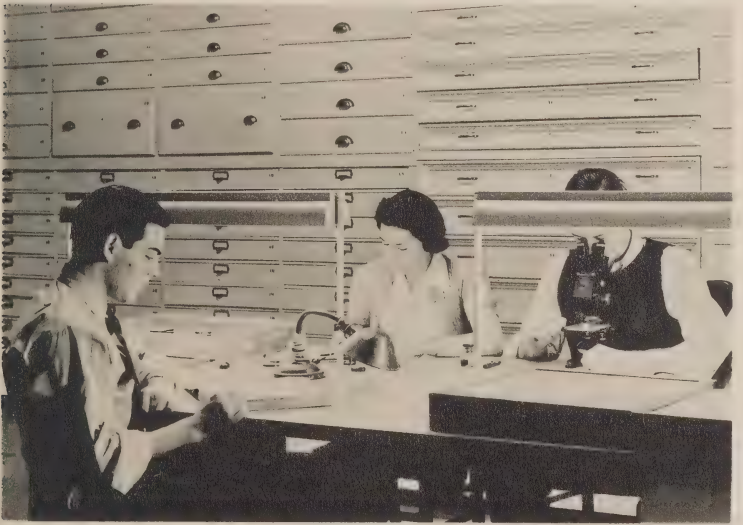
Whether all science collections—namely those of mineralogy, geology, palaeontology, botany, zoology, and anthropology—should be put together or set apart depends on how the classrooms and laboratories of these subjects are disposed. Most colleges that have separate geology and biology buildings have separate museums in these fields, each housed by its own department. Where all science teaching is under a single roof, as in many colleges and a few universities, the usual preference is to have the collections under this same roof. Rarely has the problem been met as at Dartmouth, by putting the science collections together in a building apart from the science instruction building. In the great universities, with several scattered departments for natural sciences and large museum collections in more than one line, practice is divided between scattering and assembling museums. Centralized museums are to be found at Harvard, Yale, Michigan, and Colorado. As we shall see (page 53), there are administrative plans at these places which do much to offset the effects of physical conditions. Decentralized museums are best developed at California, where there are important units for palaeontology, botany, vertebrate zoology, and anthropology, besides strong collections for geology and invertebrate zoology. Less fully carried out, this plan is seen at Chicago and perhaps a dozen other universities each of which has several special museums; and in its rudiments the plan is found at a score or more of universities that have at least one special museum. Decentralization has growing favor at some places with centralized museums.

Choice between the two plans, for the great university, seems to turn on what is desired—whether an independent museum program as such, or the use of museum material in academic teaching and research. Experience shows that a central museum tends to become a free establishment, with objectives and work of its own; whereas decentralized museums, growing up in response to the needs of separate departments or schools or institutes, are quite certain to develop along the lines of these needs. Where the staff of an independent museum shapes its program of investigation without reference primarily to the interests of non-museum faculty members and their graduate students, encyclopedic collections are brought together and related investigations, especially in zoology and botany, lean toward producing systematists, without adjusting this interest to other work.

Sometimes the example of the university library is pointed to as a precedent for museums. The central library on the campus commonly presides over scattered department libraries as well as over its main collection, and by inference it is reasoned that museum materials in all the different fields, even including art, should be controlled from a single museum center. However, this idea overlooks differences between management of books and of museum objects, as well as the difference between what a librarian must know and what a museum worker must know of his collections.

In short, museum questions have to be decided on their own merits in the light of what the institution wants in the way of collecting, research, and publication. It is generally felt that for purposes of teaching and graduate study

PRINT ROOM, ALLEN MEMORIAL MUSEUM OF ART OBERLIN COLLEGE



COLLECTIONS IN USE AT STRECKER MUSEUM BAYLOR UNIVERSITY

decentralization is the more workable plan. But this presupposes that in either case there will be proper staffing by museum workers.

MUSEUM WORKERS—people familiar with museum problems and at home in museum work—are needed to keep museum material safe and to use it effectively. Teaching collections go to pieces in the hands of professors who do not know how to take care of them, and who may not want to be bothered. Research collections cannot be brought to a point of importance, or kept there, by people who do not understand the task.

No matter whether a museum is administered as an adjunct to a department or as an independent unit, it should have the required attention. Obviously a centralized museum must be in the care of a special staff, and the same material administered in several parts by different departments ought to have at least the equivalent care. Yet this does not seem to be fully recognized. One of the commonest fears expressed by museum people, who naturally want to have museum collections in proper hands, is that decentralized museums will be run by uninterested professors—that only a central museum will be given over to trained museum workers—that decentralization is bad, if only for this reason. Such fear should be groundless. Every college and university has the duty of putting museum workers where they are needed on the faculty.

Division of museum labor is important. The care of every collection entails what might be called skilled drudgery as well as enlightened supervision. It is just as necessary to provide competent assistance as to put a competent person in charge. The common team of a preoccupied teacher and a student assistant is bad for even the smallest teaching collection. If a little museum unit calls for only part-time care, it should have part of the time of a qualified curator—who may teach, too—and part of the time of an equally qualified helper. There are several small museums on most campuses and well might there be also a technician who could apportion his time among them.

A NEW TASK for museums on the campus is being developed in the field of art. This consists of dealing with the student body as a community to be approached in ways that have nothing to do directly with academic work. Pursuing this line of effort, some art museums now lend objects to students for their rooms. They put up exhibitions in the gymnasium, the library, the union building, and other places where students go in free time. Art lectures are given for all who will attend. Such activities aim to give each student a contact with art as general cultural background. The work is very important, and is certain to grow.

In the science field there may be room for similar efforts, taking straight to all the students messages some might otherwise never hear at college. Through simple changing exhibits, installed at selected places on the campus, it should be possible in four years to unfold the general plan of scientific knowledge and something of its application to common experience.

Anyway, art is already reaching out to all of the students, not waiting for them to come formally to its offerings.

ARCHITECTURAL PROBLEMS of museums on the campus have to do less and less with museum buildings, more and more with the influence of museum functions on art and science buildings. Structures of a new type, buildings combining museum facilities with other teaching and research facilities, are appearing. Many of these buildings are called museums—the canary having eaten the cat—but they are distinct creations, modern homes of the study of art and science.

II

ART MUSEUMS

There are more than 100 college and university art museums, large and small, in the United States. About 40 might be called outstanding; and 25 of these have their own buildings, all but three of which were designed for museum purposes.

THE GROWTH OF ART MUSEUMS on the campus, though mostly of the last 25 years, began in 1831 with the establishment of Yale's Trumbull Art Gallery. Objects of art had made their way to colleges before that, as in the case of the portraits on the walls of Harvard College and of William and Mary; but they had been thought of as furnishings. In fact the pictures left by James Bowdoin to Bowdoin College in 1811 were in the way, and they continued to be in the way for decades. Not until art began to be taught in colleges could art collections be viewed with an eye to their educational usefulness. Then, in the 1850's, the University of Michigan bought casts of classical sculpture, and Harvard accepted the Gray collection of engravings. In the sixties, through a gift from Augustus Russell Street of the Class of 1812, Yale acquired the Jarves collection of Italian primitives that even now adds luster to the Yale Art Gallery. In the early seventies, when public museums of art were appearing in cities, Charles Eliot Norton began teaching art history at Harvard, creating need for the art museum that was started there in 1895 by a bequest in William Hayes Fogg's memory. Meanwhile other colleges and universities had gone in for art, and in the eighties three of them—Wellesley, Smith, and Princeton—put up art museum buildings.

Most of the present substantial development has come since 1915. The total cost of buildings up to that time was below a million dollars. At the end of 1941 it had reached $5,400,000.

ART TEACHING in colleges and universities, which shapes the affairs of campus art museums, is still undeveloped on the whole although recent decades have seen great advances.

In the colleges of liberal arts, where the appropriate purpose is not to train artists but to make educated laymen with some taste and understanding in art, there are several different approaches. Some institutions give only the history of art; others give only studio work; and still others give courses in criticism, either alone or in connection with art history or practice. These differences are reminiscent of last century, when separate beginnings were made in the teaching of art by classicists, historians, and painters; and they show lingering resistance to what is now known to be best, namely, all three approaches together (history and criticism with studio practice as laboratory work). This comprehensive treatment gains in vogue as art comes nearer to its natural place in the curriculum on a par with other main fields of liberal education; and it steadily increases the need for art museums by binding together the forces that promote them. Also helping to promote museums, by the way, is the fact that art is now summoned to the service of other subjects that can use its objects as background. Art works, reflecting the spirit of times past and portraying the settings from which events have sprung, are increasingly called for by teachers of history, social science, philosophy, literature, and language.

In the universities, as in the colleges, there are different treatments of art; but here the reason for the principal difference is that some universities aim to train artists whereas others aim to educate scholars and allied workers in art. Few are the places where—as at Yale—history, criticism, and practice are given in balanced proportion. Some institutions, state universities conspicuous among them, offer practical work in painting and other arts with little, if any, work in history or theory. Commenting on the "virtuoso theory" that produces this state of things, Keppel and Duffus (*The Arts in American Life*) say that the university has suffered from the idea "that a sound foundation of technical skill could be acquired only by unremitting practice from childhood onward, leaving time for little more than the rudiments of a general cultural education." And, they add: "This theory, carried to the extreme, produced artists who were admirable technicians but who knew little about the world in which they lived." The trouble, happily, is being remedied by the broadening of university work in art to include all three approaches; and the effect on museums, in universities as in colleges, is salutary.

The universities that emphasize art scholarship rather than practice, with the aim of making teachers, writers, investigators, curators, and other critics, are already the strongest backers art museums have. Here again one observes ever increasing use of the studio as a laboratory. But not to be confused with this kind of laboratory work is another kind, already well launched, that puts art objects under scientific inspection for the nature of their materials and construction. The latter line is a branch of criticism and it comes from the initiative of museums themselves, notably of Harvard's Fogg Art Museum.

It need hardly be said that university art museums are parties to research, as well as teaching. Archaeological research springs, in fact, from the very soil that yields museum material; and researches of other kinds are advanced by comparative and technical treatment of museum objects after they enter collections.

THE ART COLLECTION includes original works and reproductions—the latter category more numerous, the former more charged with problems.

Original works are clearly indispensable wherever art is taught, and most campus art museums buy some and borrow others. Requirements are specific but more or less different in each institution according to the character of courses. Some needs may be satisfied through the presence of a public museum nearby, but rarely are all the requirements of a college or university met in this way, as they are for New York University's graduate school of fine arts that is just across Fifth Avenue from the Metropolitan Museum.

There is now full agreement (after some years of discussion) that none but objects of real merit should be acquired. However, this does not mean that the task of making a collection is beyond the powers of an institution unless it has a great deal of money to spend. To possess quality, objects do not have to be famous. Great works are costly, but as to such works the head of Beloit's fine arts department says, "It is not altogether a misfortune that the masterpieces of painting are out of reach. College teaching ought to bring the arts into a closer relation to the life of its students than it can if they are led to think of art only in connection with great masters." Debates on "buying for quality" versus "specimen collecting" have been carried on mostly by people concerned with European paintings, and they have created an impression that all but the wealthy might as well give up. But experience shows that a sound plan can be carried out with modest funds if it is followed persistently over a stretch of years.

Where there is teaching in both history and criticism, a widely representative collection, though not necessarily a large one, is required. Few colleges have as yet made the beginnings of well-rounded collections; but it must be remembered that few colleges have rounded course offerings in art either. As curriculums develop, plans for collecting should take form; and with this change a lot of talk that is only to justify old ways of doing things will be heard no more. Then it will be found generally that for illustration of history courses the collection should touch high points of the history of culture from ancient to modern times, and certain primitive arts. For consideration of art processes there should be representations of the different mediums and techniques, but objects in the historical categories would cover most points here. For work in theory and criticism again the objects acquired to meet other needs are useful; and besides there may well be a special line of collecting in some branch that does not offer too many financial problems. Prints, drawings, and water colors are not uncommon specialties.

One college with a well-conceived plan for adding to a small collection is Amherst. Its scheme, set forth in a

PAINTINGS FROM THE COLLECTION VASSAR COLLEGE ART GALLERY

REPRODUCTIONS FROM COLLECTION VASSAR COLLEGE ART GALLERY

few mimeographed pages, is clear as to purposes and specific as to what is needed. Such a statement is helpful to those who prepare it, and if distributed to alumni and friends may bring needed gifts.

Some museums have acquired showings, in one or another special field, beyond the bare needs of teaching. In several instances gifts have set the pattern; but often patient specialization, begun with the needs of academic work in mind, has been carried to a point of distinction. Local circumstances may have suggested the line as at Mills College, which has turned to Far Eastern art, and Newcomb College, which is backing up artists of the Southern States. At Washington, appropriately, Howard University is going in for art of the negro. From special beginnings some museums have later been rounded out. Smith College, after interesting itself for many years in the origins of modern painting, is now acquiring classical and medieval objects as background. Harvard's Fogg Art Museum has long since gained strength in several lines—building up a general collection without, however, losing sight of its early emphasis on prints. Also Yale's comprehensive Art Gallery has many collections that would be notable specialties if they were by themselves.

Every museum, large or small, needs an acquisition policy to guide its growth and to protect it from incursion of things that are not up to standard or are not wanted for other reasons. This calls for a plan and the will to stand by it. Some hard-bitten museum people declare that no plan can long be held to; but if the administration is willing to do its part, in ways presently to be noted, the art faculty can usually make a pretty good job of collecting. This means that the boards of colleges and universities should call a halt to being abused by donors, whether alumni or others. Especially to be held off are persons seeking permanent memorials through awkward agreements that trail along with their favors. The time has now passed for accepting gifts and bequests with conditions that require keeping them intact and separate, exhibiting them in perpetuity under someone's name or at a specified place, or otherwise putting the hopes of an individual ahead of the rightful interests of an institution. Most museums stand on their rights "in principle;" but troubles will not be over until trustees and directors stop the making of exceptions. The matter is not simple, as social and professional competition is strongly involved. But the problem is shrinking progressively with the passing of years. Everyone concerned, in public museums and in colleges and universities, has a duty to perform when donor pressure is felt.

As a rule there is an art committee in each institution charged with the duty of deciding upon purchases and accepting or turning down gifts. This committee is customarily advisory to the board of trustees of the college or university, and, nominally at least, the board takes all formal action. On the committee there should be both trustees and faculty members and perhaps some outside advisers as well; but if the group is large, or especially if it is scattered, there should be a small executive group including always the head of the art department, the museum director, and at least one trustee. The person directly responsible for the museum should be equal to steering this group, and should be allowed to do so. The right to make recommendations may be his, though others will suggest; and he may well have the right of veto. The more power a good director has, the better. Such a man will work in full consultation with his colleagues, and he will go to his committee for advice. He will also need to go to the committee for backing when difficult issues arise, and the committee should be equal to giving staunch support.

Not a few museums, the older museums among them, have the job from time to time of getting rid of things, sometimes large groups of things, that they do not want. The patron deity of museums should be Janus, ever reminding those in charge that the side of the door leading out should be patronized at times as actively as the side leading in. If there are legal barriers against disposing of collections, the task of making adjustments may be difficult, but it cannot be as hopeless as it often looks. There is usually some way, within law and honor, to be sensible.

Reproductions—photographs and prints of original works—though not always thought of as museum objects, are strictly such. They have a role of their own as visual records, making the art collection deeper so to speak by adding comparative data, and making it wider by going into otherwise almost inaccessible fields like architecture. It is true that one original is better than many reproductions, but the many reproductions are nevertheless indispensable. Photographs (as photographic positives and slides) make up the largest category of reproductions, and prints in black and in color are increasingly abundant.

Reproductions should be brought together systematically. The 1,800 reproductions included in each of the art teaching sets placed in colleges and universities by the Carnegie Corporation are intended to give a start to this kind of collecting. Thousands of items are certain to be needed; many institutions have from 25,000 to 50,000 slides for class work and some have up to 100,000 photographs to meet the demands of special studies. With the development of color photography new types of slides are coming into use, and slide collections must respond.

There is a Color Slides Cooperative group with headquarters at McCormick Hall, Princeton, keeping track of this matter.

Since many useful reproductions are in books, the art collection is not sharply marked off from the art library; and, if only for this reason, the art department should have a special library close at hand. The general campus library seldom has large holdings in the fine arts, and so the way is usually clear for a departmental library to be built up as required. This means at least 2,000 volumes on open shelves and twice as many in stacks. Provision for 10,000 volumes, altogether, for an active college department, and twice this allowance for a university school, would not be excessive.

DISPLAY of art objects is a less involved and less taxing matter for college and university museums than for public museums because art courses give students some introduction to the works that are shown, and there is no need for arrangements such as are made to catch and hold the attention of visitors who come to exhibits cold. Simple installation, in a neutral setting under good light, is the principal requirement.

Hanging space on walls or screens will take care of pictures, but for most other objects cases are necessary. Standard cases of modern design, with metal frames, are strongly recommended even though their cost may limit the number purchased at any time. Small, one-panel, shallow wall cases are most convenient. Where only one room is available for exhibits, it is well to have some way of putting the few required cases out of sight when they are not in use, either by moving them to an adjacent

TEMPORARY JAPANESE EXHIBITION MILLS COLLEGE ART GALLERY

A TEMPORARY EXHIBITION HOWARD UNIVERSITY GALLERY OF ART

storage or by pushing them into recesses that can be screened over with hanging surfaces. All possible flexibility should be preserved so that objects may come and go at will as the work of the year progresses.

Since arrangements are made always with the student and not the outside visitor in mind, exhibit rooms should be designed as work places. This gives a special turn to the problem of lighting as we shall see (page 29).

TEMPORARY EXHIBITIONS of borrowed objects are necessary, even though the permanent collection is extensive. Art courses call for much more museum material than any campus museum needs to own—more than the museum can hope to acquire in some lines, and more than it should have around permanently in others. Contemporary art, especially, should be brought to the campus in quantity, to show what is going on as well as to help in exposing students to many and various works. Also arts of the past should be represented in temporary exhibitions as fully as circumstances allow. Great shows are neither essential nor, in fact, often to be had; but good shows that illustrate courses and supplement course work are greatly to be desired. Where there is space for more than one show at a time, minor and sometimes informal exhibits may be put up and taken down at will, thus adding to the coverage of the year and often increasing the interest and value of more important shows made from the home collection or borrowed from outside.

Exhibition needs of a campus are on the whole distinct from those of a public museum. Most of the exhibitions put on the road regularly for museums have but limited usefulness for academic work, and even those that are good are obtainable only once, whereas the requirements of teaching reassert themselves periodically. Here is a chance for teamwork among institutions with fairly like needs. Certain requirements could be met with ever increasing fullness if acquisition policies were to be framed cooperatively with a view to interchange as well as to use at home. Other requirements would yield to cooperation in getting up traveling shows for established itineraries. Of the latter sort are the "Big Ten" Exhibitions (actually the big nine, since Michigan dropped away from Chicago, Illinois, Indiana, Iowa, Minnesota, Northwestern, Purdue, Ohio State, and Wisconsin).

Some museums have found it desirable to organize an occasional temporary exhibition of outstanding scholarly character, as Mills College did not long ago in getting together a notable Chinese show. The indirect value of such a project, in terms of prestige, experience for the staff, and impression made on students, is considerable. At Harvard, the members of a graduate class in museum work prepare an exhibition each year, for experience. They plan and assemble the show, install and label the objects, write the catalog.

Some shows may be put on for reasons tangential to teaching. Whether or not exhibitions of student work are regarded as in this class, they are worthy of place in the program. Also work of faculty members and of people who have lectured at the institution may be of interest. In the case of *any* show there is much to be said for its interest as well as its educational and cultural values. Temporary exhibitions are a means of refreshing and enlivening the regular work of the campus.

How long should an exhibition run? Ordinarily for a month; but with some shows, including minor shows for special purposes, circumstances dictate otherwise.

Whenever an important exhibition is opened, the museum comes face to face with questions of duty to the student community and to the local public. These two groups have claims of different urgency. To townspeople, as we have already said, the museum owes only what it can do without prejudice to academic work. This may or may not indicate a public opening. To members of the student community, whether enrolled in art courses or not, the museum owes all it can do to make art a part of the environment on the campus. Several colleges do more than ask students to their shows. They hold student functions, dramatics, concerts, and dances in the art museum building. Says the head of one fine arts department: "All these uses of the building form a part of an educational program based on the theory that one of the best ways to enjoy art is to have it around you when you are doing something else. There are colleges where a good many students graduate without ever going near the art gallery. But at Beloit we have practically the whole student body and faculty in the building several times a year."

HOURS during which, at present, most campus art museums are open are from nine until five on week days, and from one or two until half past four on Sundays.

Few places open at night, but this is likely to change with the growth of the museums, and under the influence of campus libraries, which have long since adopted evening hours: from eight until half past nine or ten. At Oberlin it is found that students not enrolled in art, and also faculty members and some townspeople, come during weekday evening hours of seven to nine.

EXTENSION, by showing objects of art in rooms of different departments, may well cater to teaching needs in a number of fields. History departments often ask for exhibitions, as for example of prints on the French Revolution. Social science, philosophy, language, literature, and other fields may make similar requests; and the job of meeting such calls is taken more and more seriously by art departments.

But there are also less formal ways of getting art before numbers of students. Many different college buildings have walls that need pictures. At Iowa, social rooms in the union building are enlivened with paintings; and law students, who kicked when the plan was started, are asking for pictures to hang in their own rooms now. At Yale the gymnasium has the Art Gallery's Whitney collection of sporting art. Prints from the Garvan and other collections are in some of Yale's dining halls and common rooms. Such examples are worthy of being followed.

It is not enough that the art museum use outlying spaces for storing of unneeded pictures, though this is all right and often helpful to all concerned. Good things, selected because they are good, should be shown. Pictures in Yale's gymnasium loan are important enough to have been needed, not long ago, for an exhibition at New York's Metropolitan Museum. Several institutions have borrowed traveling exhibitions for buildings other than the teaching place of art.

LENDING TO STUDENTS—sometimes to faculty members as well—is now common practice. Such loans are made from special collections of art objects for use in living quarters. Lawrence College in Wisconsin, where the plan seems to have started, has been doing this for 20 years or more, and fully a score of other colleges and universities, among them Bowdoin, Smith, Beloit, Wesleyan, Brown, Harvard, and Yale, have taken it up. Color reproductions of paintings and some original works, most often prints, are lent. Several institutions, including Vassar and Brown, have taken over sets of reproductions prepared for the purpose by Raymond and Raymond, art dealers of New York. The pictures, suitably framed, are rented for the academic year as a rule. In some places the fee—from 50 cents to five dollars—can be applied to the purchase price if a picture is bought, as frequently it is. The plan, once started in this way, may be extended through profits on purchases, or through gifts or special appropriations. Experience shows that a few good pictures for lending are better than a larger number of poor or mediocre examples.

MUSEUM SPACE should be included within the precincts of the art department. It is a mistake to think that an exhibition room anywhere on the campus is all that is needed. Even a makeshift exhibition space that is part of the quarters in which art is taught is better than a more ample gallery in the administration building, the library, or the chapel. A makeshift arrangement may prove to be strategic since it calls attention to need for the kind of building an art department should have.

Museum space means more than a place for exhibits. It should include adequate room for the care of a growing study collection of objects not always on display, and of reproductions. Neglect of this physical requirement is not peculiar to college and university museums, since public art museums also commonly lack space for their study collections. But university museums above all others should set the example of having space for the reference function as well as for exhibition.

Physical provisions for museum material, at best, are woven into other provisions for teaching so that classrooms, library, and museum form an interlocking system, not a mere juxtaposition of the different rooms. Classes should be able to meet in exhibition rooms; and classrooms and study rooms should have arrangements for temporary displays. The museum library should take care of photographs and perhaps also of prints and lantern slides, and books should be used in the presence of collections. Such interplay makes it impossible to think of a museum room as a functionally tight compartment; yet there are fine arts buildings, including some recent ones, that contain galleries in about the way an oyster contains a pearl.

A very simple expression of the right principle is found at the University of Colorado where the art department has, for all its purposes, only a single large space which it has arranged to provide for the care, exhibition, and use of art collections. A sort of vault has been built in the center of the space, the outer surface of this vault being used for exhibition and the zone around it for teaching. This humble arrangement shows more understanding of what is required than many a whole building.

Equipment for study rooms and storage space includes sliding mesh-covered racks for paintings, stacks of trays and shelves for objects in the round, cabinets designed for prints, and vertical files for photographs and slides. There is a chance for further study of this problem by museum people, teachers, and architects, with a view to designing equipment exactly suited to academic requirements.

A SMALL SPACE IN USE UNIVERSITY OF COLORADO ART GALLERY

A UNIVERSITY BUILDING YALE ART GALLERY, YALE UNIVERSITY

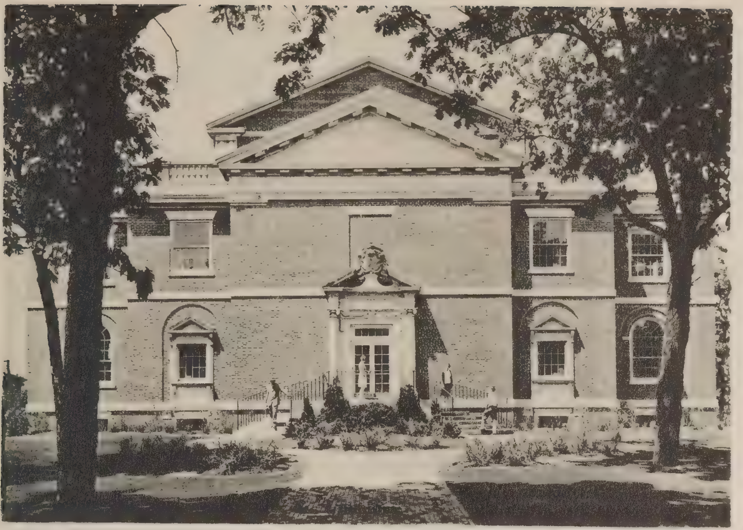
LIGHTING arrangements should recognize that the campus gallery is a workplace, and a workplace used ordinarily by day. This dictates the fullest possible use of natural light, with artificial light as an aid when required and as sole reliance for evenings. There is no real parallel to this in public museums, where exhibits are for crowds and where the growing nighttime demands of the adult population are making artificial light in glassless galleries increasingly the thing.

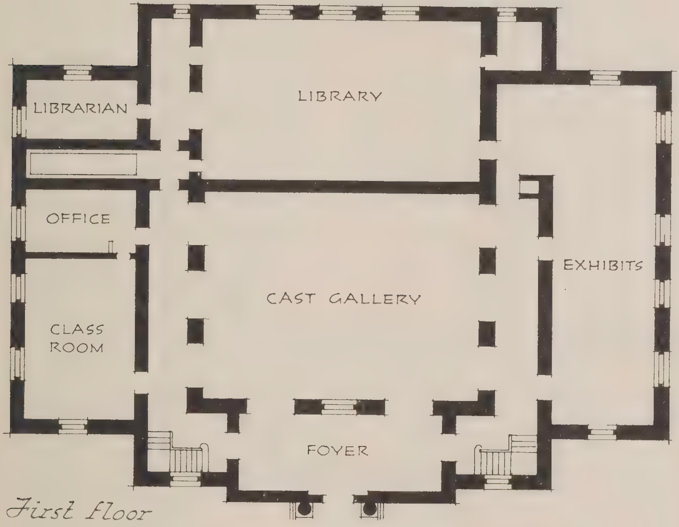
On campuses one looks first to some of the fine arts buildings with pearl-in-oyster galleries for the exclusive use of artificial light. Such illumination may be good and may draw students into the exhibition rooms, but it does not offer any advantages to compare with the livability and workability of other rooms in these buildings. Commendable, however, is the use of artificial light in some old buildings to salvage for museum purposes space that would otherwise be lost. Thus, with light and color scheme, Vassar's Classical Museum has transformed "dark and dingy quarters" into a usable combination of gallery, classroom, and shop.

In designing for natural light the architect has a choice between skylights and windows. Skylights leave walls free for display, but they are awkward in other ways. They require elaborate artificial lighting equipment even for daylight hours, and are otherwise costly to install and hard to maintain. Also they limit seriously the character of the building. Windows at a low level produce glare. But good natural light can be provided with the aid of modern diffusing glass in high windows—forming, it has been suggested, a continuous band that can be reduced at will by a wall within. Artificial light, needed in its place, can be flooded on walls from concealed reflectors above.

THE COLLEGE BUILDING best suited to needs of the art department is a museum building in spirit. It may not be called a museum, since classrooms and studios take much of its space, but exhibition rooms are the dominant features and museum functions pervade the structure.

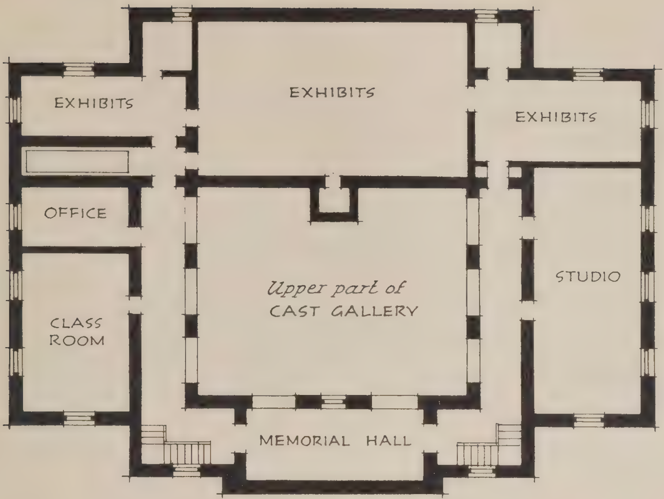
An example is the Wright Art Hall of Beloit College, built at a cost of $150,000 in 1929. This building has a central exhibition space with lateral exhibition rooms and a library at the rear on the ground floor; upstairs are galleries, classrooms, and an office; in the basement is a lecture hall seating 200, and rooms for receiving, work, and storage. Discussing this building in a recent article (*The Museum News*, March 1, 1939), Philip Barrows Whitehead specifies in general for such structures that there must be: rooms for temporary exhibitions (loans and student work); rooms for permanent exhibitions; and classrooms for recitations, seminars, and studio or laboratory work; besides a room for live storage on each floor, the library with a librarian's room and individual staff rooms directly adjoining, the auditorium, a janitor's work room, photographer's room, and receiving room. Agnes Rindge has described another good example: the Vassar art department's quarters in two floors of the Van Ingen Library (1937) connecting with remodeled Taylor Hall (*Vassar Alumnae Magazine*, June, 1938). Here museum features are inseparable from the whole; besides the formal arrangements for display in exhibition rooms, "every possible wall surface is equipped with strips to hold photographs . . . to hang prints . . . (There are) separate study rooms provided for the introductory and intermediate courses, since they employ the largest volume of illustrative material . . . one for sculpture, one for architecture, one for Italian and one for northern painting . . .



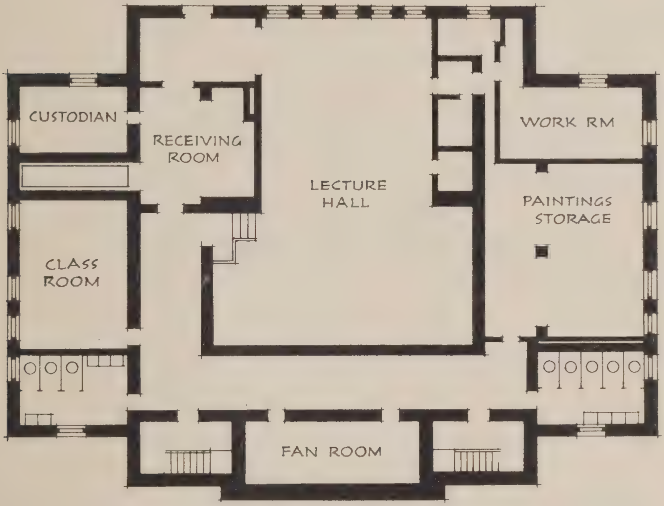


THEODORE LYMAN WRIGHT ART HALL
Berlin and Swern, Architects

BELOIT COLLEGE

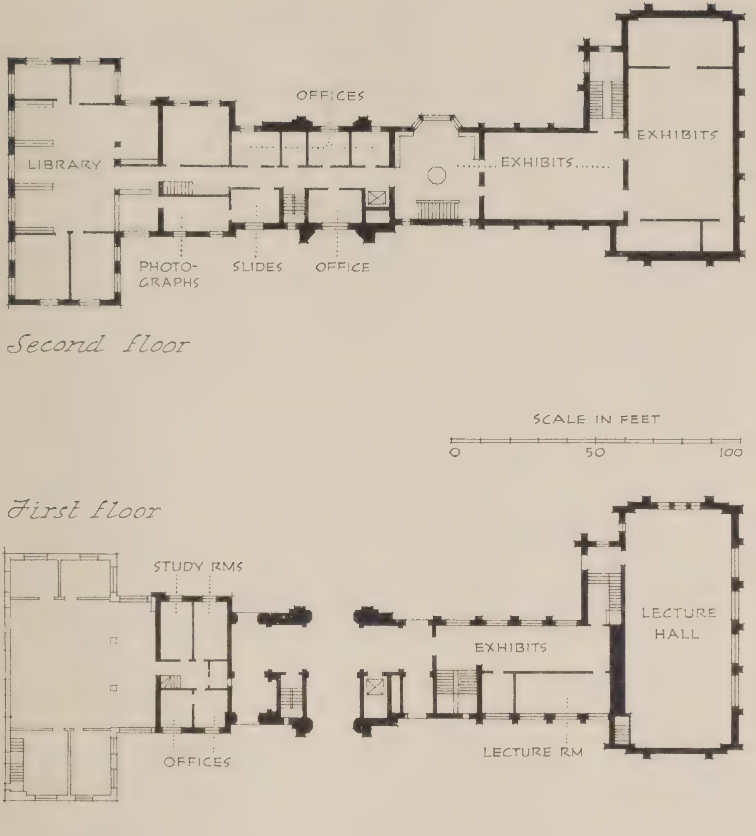


Second floor



Basement

THEODORE LYMAN WRIGHT ART HALL BELOIT COLLEGE



Second floor

First floor

VASSAR COLLEGE ART GALLERY VASSAR COLLEGE
Allen and Collens, John McAndrew, Theodore Mueller, Richard Bennett, Architects

a room in the remodeled part displays Dutch, Flemish, and Spanish XVIIth century painting while the student is reading that assignment . . . room for the storage of slides where members of the department can prepare their lectures . . . another room houses the photograph collection. . . ." Here the work in gallery, library, seminar, study, studio, and classroom is all a single process.

Architects might well look further into problems of space organization in the light of experience with these buildings at Beloit and Vassar, and with somewhat comparable structures at Smith (developed from a building of 1880), Wellesley (1889), Mills (1925), Washburn (1925), and Bowdoin (1894), besides the several university museum buildings noted below. As to architectural style, suffice it to point out a tendency toward modern design carried as far as can be within the framework of present campus traditions. Vassar offers a good example.

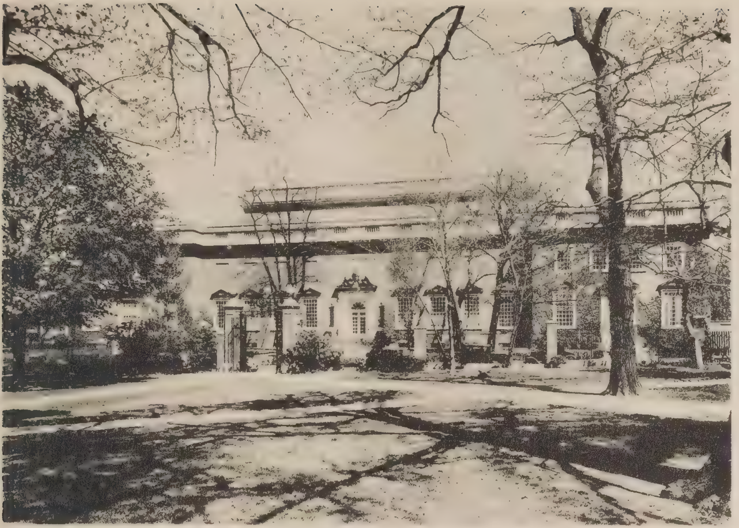
Considering the growth of art teaching in colleges, it seems likely that the next few years will see many new buildings provided for this work. Such buildings are as necessary as the ubiquitous science building.

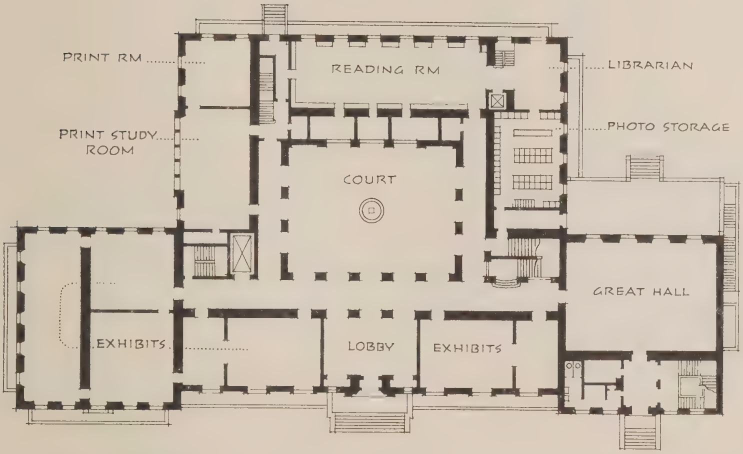
THE UNIVERSITY BUILDING that houses art collections is especially in danger of being envisaged as a guardhouse for these collections rather than as the place where work that needs collections is carried on. This is because the university art school often occupies more than one building and may be tempted to put the art collections off by themselves. A much better arrangement is to make a unit of all academic work that relates to art objects and to house this work and strictly curatorial work together.

Experience prescribes, for the purpose, a building that looks like a museum, with conspicuous exhibition rooms and space for study collections. But actually such a building provides properly for lecture, class, and seminar rooms, rooms for staff and student researches, laboratories, and library reading room with stacks, besides the necessary receiving room, photographic work rooms, and offices. Although the university museum may have some studio facilities, it need not embrace the specially equipped studios and shops that are required for classes in painting, sculpture, and other creative work, or the storerooms, locker rooms, and like facilities needed to make them effective—all of which form a natural separate unit.

A university art building differs from a college art building in having provision for care and display of much larger collections; and it runs more to laboratories and research facilities. A good example is Harvard's Fogg Art Museum, built in 1927 at a cost of approximately $1,230,000. The plans reproduced herewith show its character. University architects should give close study to this building, and to the Yale Art Gallery, and buildings at Virginia (1935), Oregon (1932), Washington (1927), Louisville (1927), Stanford (1917), and Princeton (1889). There is also a new (1939) group of art school buildings, with a gallery, at the University of Southern California.

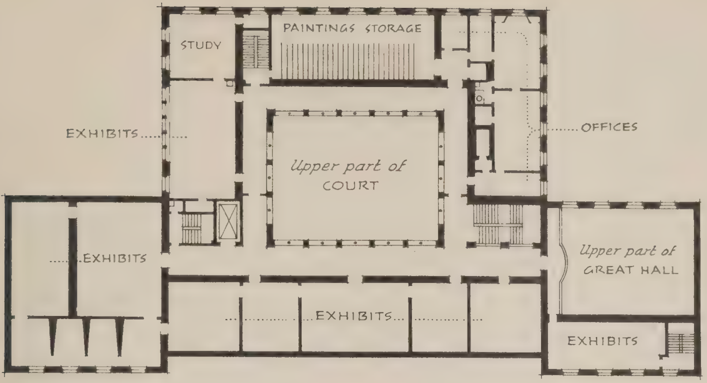
ADMINISTRATION of an art museum involves the question of whether the museum had better be independent and under a director responsible straight to the president of the college or university, or part of the art department and under a curator responsible to the head of that department. On the face of it—considering the in-





First floor

WILLIAM HAYES FOGG ART MUSEUM HARVARD UNIVERSITY
Coolidge, Shepley, Bulfinch, and Abbott, Architects



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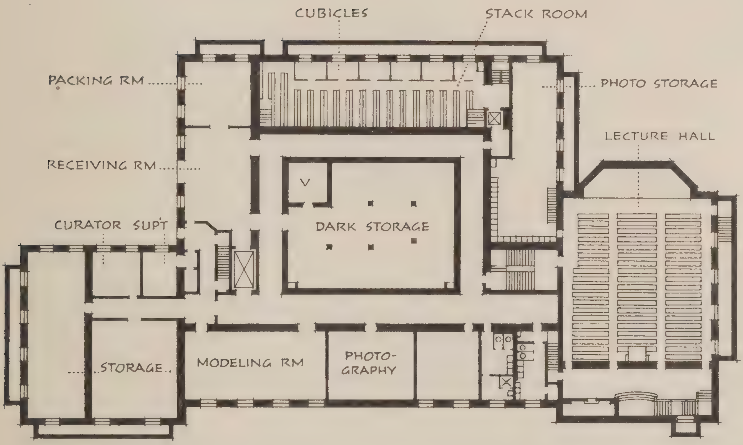
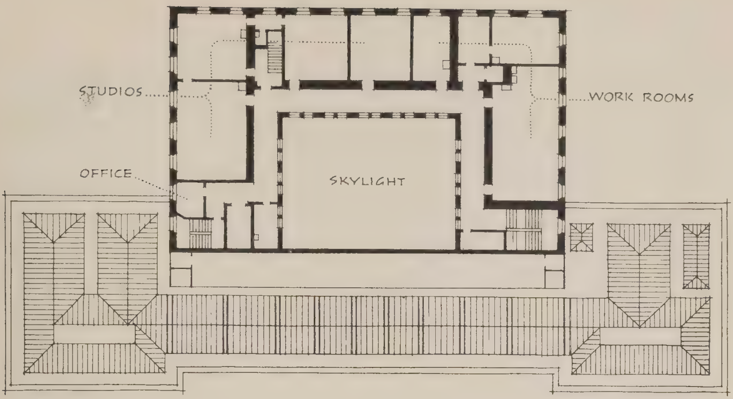
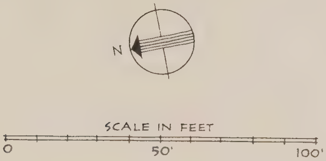


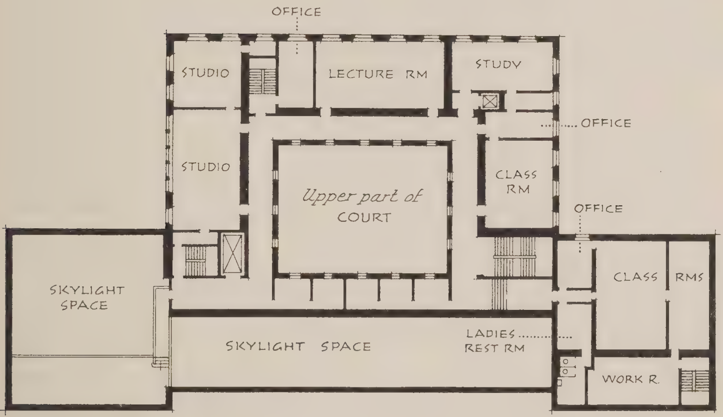
Basement

WILLIAM HAYES FOGG ART MUSEUM HARVARD UNIVERSITY



Fourth floor





Third floor

timate relations that should exist between the curatorial and teaching functions—one might well be at a loss to see how the museum could be fully effective if set up by itself. But experience shows that a museum thrives best independently, with a person in charge who is on the spot for results. Thus there seems to be occasion for a little fence straddling; and some of the leading museums, including those of Harvard and Yale, Mills, Oberlin, Smith, and Williams, have found a way to do it. The museum is set up as an independent unit, and the directorship is given to someone who also holds a high place in the teaching faculty. Similarly curators, if there are any under the museum director, may hold double appointments so that the teaching and museum staffs are interlocking. At most of the institutions where this plan is followed the museum director is also *head* of the art department; and while this may be looked upon as an accident of the moment, everything points to its being brought about by circumstances that tend to perpetuate it. Point is given to this view by the fact that many science museums have arrived at a like solution. (See page 53.)

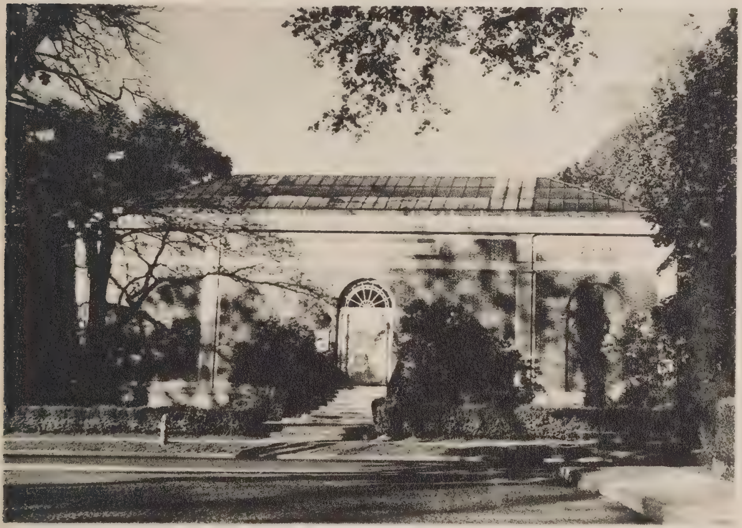
At some other colleges and universities the art museum remains within the art department. This is so at Amherst, Beloit, Dartmouth, Mount Holyoke, Vassar, and Wellesley among the colleges, and at California, North Carolina, and Washington among the universities. But there is a current of opinion in these institutions favoring independence for the museum, as a stimulus to its work, especially in collecting.

The director often has the guidance of committees. There is the art committee, mentioned above (page 20), watching over the growth of the collection, considering what to accept and what to reject, and taking the brunt of any objections to what is done. This group is not ordinarily part of the mechanism of control; its function at best is advisory. Some museums have inter-departmental committees that make suggestions. At Minnesota a policy committee, representing five departments having to do with art, is in actual control of the University Gallery; but this is exceptional. College and university museums do not ordinarily have boards of control, save for the boards of trustees of their parent institutions. The few that do have boards are either old establishments retaining their early forms of organization, or public museums affiliated with universities.

STAFF requirements, under the director, depend upon what is planned for a collection. If only a teaching collection is desired, as in the college and all too commonly in the university too, the director needs help for only care and physical handling of material, for installing exhibits, especially temporary exhibitions, and for managing filed collections. But if research material is to be brought together there is need for research curators. The importance of a curatorial staff is well attested at the Fogg Art Museum where men who are investigators as much as teachers are responsible for the important and growing collections of old master drawings and prints, medieval sculptures, early Renaissance paintings, and Oriental art.

The art librarian is in effect also a museum person into whose hands the "flat" collections fall as a rule. This gives particular point to the art department's case for having control of art books. The use of such books is almost wholly by those who are working in art, and there is a fairly clear line between art and other books since

HENRY ART GALLERY UNIVERSITY OF WASHINGTON



SMITH COLLEGE MUSEUM OF ART SMITH COLLEGE

art is not much rooted in scholarly serials that admittedly ought to be kept in the general library stacks. A separate art library in the art building is therefore not hard to arrange for, and the art librarian, though nominally a member of the central library staff perhaps, should work under the direction of the art faculty head.

Where a staff is partly built up there is hardly room for doubt as to what people are needed; but where a museum has little money and is trying to make something out of nothing there are questions and to spare. Usually part-time opportunisms have to be devised. Every museum needs a photographer's services; and, to make a part-time job, it has been suggested that the center of photography on the campus be placed in the art museum—which seems practical and likely to give the institution a very high grade of work for all purposes. The superintendent of the building may be a man of parts, equal to taking much of the care of incoming and outgoing exhibitions. A competent secretary may be trained as a registrar. Students may guard exhibitions. But, whatever the ingenuities, no head professor should serve also as janitor, though some say they do.

FINANCES shape the museum and show pretty clearly what the administration wants to have done in art. Most campus art museums are supported wholly by annual appropriation, but some, including both college and university museums, have income from earmarked endowment, and some get contributions regularly from friends.

Museum endowment, invested with other endowment of the parent institution, gives assurance of continuity, but it does not remove the need for something in the way of appropriation each year to keep the work before the officers and trustees and in step with growth of the institution as a whole. Although unrestricted endowment is most useful, benefactors often choose to provide for purchase of art objects, which is a very useful purpose if purchase funds are supplemented by other funds for exhibitions, lectures and recitals, books and photographs, research and publication, and—most vital of all—salaries.

Gifts sometimes come in large amounts from especially interested patrons, but if a museum receives the same support in smaller contributions from a larger number of friends it is less likely to be left suddenly with nothing. Several museums have organized contributing societies, made up mostly of alumni. There are the Fogg Art Museum's *Friends of Art, Archaeology, and Music*, the Yale Art Gallery's *Associates in Fine Arts*, the Mills College Art Gallery's *Friends of Far Eastern Art*, and the *Friends of the Wellesley College Art Museum*. Dues are $5 a year and up, and provision is made also for single large payments after the manner of the membership plans of public museums. Proceeds are devoted to acquisition, or to exhibitions and other activities in which outsiders are most inclined to be interested. Partly to enlist support, partly to give their work national reputation, ten campus art museums publish serials—the *Bulletin* of the Smith College Museum of Art, and similar issues from the museums mentioned above and from several others.

Unfortunately college and university administrations often withhold from art museums such benefit as should come to them from disposal of miscellaneous art works received with unrestricted gifts or bequests. If an institution came by books with an estate it would turn them over to the library; and if the books were sold the proceeds would be credited—or ought to be credited—to the library's purchase fund. But art collections are commonly sold like real estate, and the proceeds taken for general purposes without the art museum having as much as a smell.

It is important that every museum have a budget of its own, and that corresponding separate museum accounts be kept in the general treasurer's office. Without this, museum work cannot very well be planned or watched over. In the accounts, running expenses should be kept separate from capital outlay for purchase of art objects.

At present one can learn only a little about how much the colleges and universities spend for art museum work in any year. Sometimes this is because the accounting is inadequate. Sometimes it is because the figures are kept secret—which seems needless and rather immature, as well as heedless of the general need for comparative information. However, available figures, together with careful estimates, show that college art museums receive up to $25,000 a year; and university art museums, up to at least $150,000 a year.

How much money there is to spend affects not only the scale of activity but also, perforce, the character of the work. A poorly supported art department with only a few hundred dollars annually for museum work can do no more than buy some prints and photographs each year. If $1,000 is available, a modest loan exhibition program can be undertaken; but at least $5,000 is really needed for this; and twice that amount can be used advantageously, especially in a university. If more than $5,000 is available, some part of the income may very well go toward items for the collection; and if there is $10,000, the collection ought to be developed systematically. From these hints an idea may be formed of the very least requirement: say $2,500 anyway, and say twice as much as that for the start of serious work. The difference between college and university appears at a higher level of support—up to the record incomes, given above, which will surely be advanced with the unfolding of museum work and the further growing up of higher education in the field of art.

III

SCIENCE MUSEUMS

There are at least 500 science museums—more than of any other kind—in American colleges and universities. About 80 might be called outstanding, and 22 of these have their own buildings, all but four of which were designed for museum purposes. However, a great many of the 500 units are teaching collections of modest size.

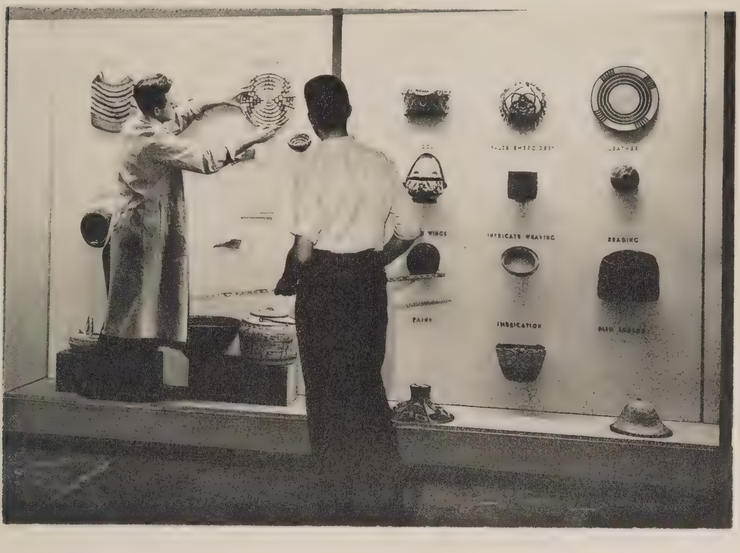
Perhaps 150 science museum units are devoted to the natural sciences in general, but most reflect the special fields of college or university departments of geology, mineralogy, palaeontology, biology, zoology, entomology, botany, or anthropology. Less than a dozen are on chemistry or physics.

A LONG DEVELOPMENT has led up to these museums. Harvard was collecting as early as 1750, although the results did not take on importance until after 1800 when the period of college cabinets began. In 1802 Yale started its mineral collection that later captured the dining hall and made it known as the Cabinet. Princeton got its first collection in 1805, Pennsylvania in 1808, Williams in 1816, and Amherst in 1825. These and other beginnings were inspired by interest in what was still an unfamiliar environment, and collecting was a sampling process, just as it was with state geological and natural history surveys which were soon to follow. In fact, the surveys themselves created several cabinets, most notably that of Michigan in 1837. Student natural history societies also helped to make collections. Amherst had an early society dating from 1825; and Williams had the strongest society, active from 1835 to 1860. The first college science museum building, the Appleton Cabinet, was put up at Amherst in 1846, 14 years after the opening of Yale's Trumbull Gallery, which was the first college *art* museum building.

The second half of last century saw rapid advances. In 1852 Harvard established the Museum of Comparative Zoology by purchasing Louis Agassiz's collection and taking to herself the zeal of this genius who soon made the museum at Cambridge into a great establishment known throughout the world. In the sixties came George Peabody's bequests to Harvard and Yale, marking the start of endowment for museums. After the Civil War, Darwin's influence set museums the task of illustrating evolution, and this gave a new and strong impetus to collecting. By the centennial year of 1876 there were 73 museums of science in colleges and universities.

As the century drew to a close, scientific interest turned from systematic to experimental biology, and the laboratory buildings that appeared then on campuses made little provision for museum exhibits. During the nineties only one campus science museum was built, the Walker Museum of Palaeontology at Chicago. And most of the older museums barely held their own.

However, the lull was temporary. Science collections were soon taken up again as instruments of teaching and research. Scores, then hundreds, of museums were begun; and many buildings were put up. Since 1900 the total cost of museum buildings at colleges and universities has been multiplied by ten, from less than half a million dollars in 1899 to almost five million dollars in 1941.



A TEACHING EXHIBIT   PEABODY MUSEUM OF NATURAL HISTORY, YALE

IN RESEARCH COLLECTION   MUSEUM OF PALEONTOLOGY, CALIFORNIA

FOR TEACHING AND FOR RESEARCH quite different kinds of museum resources are needed. Teaching requires selected material arranged in didactic exhibits and synoptic reference sets. Some things may be subject to handling under supervision, but as a whole the material is protected by glass in a fixed arrangement. Research, on the other hand, calls for copious study collections, including both worked and unworked material, with full data, put away informally, protected against accidental damage and pests, but ready to be examined and rearranged by investigators. Only exceptionally, as in the case of, say, a mounted fossil vertebrate, is there anything on exhibition of especial scientific import. In research collections, however, there may be scientific types and other irreplaceable objects.

Research collections characterize the university museum; teaching collections, the college museum. In so far as a university museum takes part in undergraduate work it may have teaching collections, like a college museum. But a college museum does not have need for research collections.

The task of building up research material is ordinarily a part of research itself rather than a separate collecting activity. The day has long since passed for exuberant field work like that of Agassiz, who got in stuff by the ton for whatever it might yield. The collector is now a student of a particular problem, and he is as much concerned with getting adequate data as with getting specimens. The research collections in a museum may be strong in some lines, weak or nonexistent in others. Project by project, the museum tends to round out collections and approach a systematic pattern; but if it were to make collections only to fill out a pattern, its material might never be the basis of research.

EXHIBITS should be designed for actual teaching needs, reflecting the subject matter of courses given by the cognate department. The museum of a biology department that has no course in entomology, for example, need not go very far with insect exhibits, although it may use insects for illustrating points of, say, parasitism or ecology. The subject of an exhibit often allows choice as to what material is used. Thus the principles of zoological classification might be brought out with specimens of almost any phylum. In this respect exhibits may depart from the exact lines of course work without in the least overstepping natural bounds. And, quite as properly, exhibits may take up relationships between subjects they cover and other branches of science.

The importance of bringing out relationships between subjects is often said to give the centralized, and therefore general, science museum an advantage over special museums. It is thought that by representing one branch after another, in an orderly sequence of cases, alcoves, or rooms, a general museum automatically correlates these divisions. But this is only partly so. Relations between sciences are numerous and involved, and the student begins to grasp them only after many crossings back and forth on different lines of thought. In truth, special museums, because of their greater freedom to digress, can bring out relationships more fully than parts of a general museum. Digressions in a general museum tend to introduce confusion, but excursions from the strict subject of a special museum may lend much of interest and charm, as well as orientation.

Science exhibits usually make use of models, diagrams, small groups, and other devices of exposition, as well as natural objects. Many of such things can be obtained from biological supply houses; but museums need also to make some of their own exhibits and so should have at least modest shop facilities and the help of a preparator, from time to time if not regularly.

College and university museums do not need to get up large and expensive exhibits such as public museums employ. Full-scale habitat groups of large mammals, elaborate restorations, life-size ethnological models, and other showy features evolved primarily for the layman, are not required in academic work. The student is supposed to have his mind on the job, and what he requires of an exhibit is clarity, not salesmanship. He looks to the museum for evidence, and this he can be given in a suitable form for his purposes from objects simply presented, and demonstrations simply made. If models of large things are wanted, small-scale models ordinarily suffice. For higher education to load itself down, physically, financially, and spiritually, with imposing and costly works of the museum preparator's art is needless and subversive. The fact that a campus museum may serve laymen as well as students is an unconvincing reason for what, by its presence, changes a student's museum into a likeness of a public institution in aims, building, staff, finances, and methods.

"It is not surprising in this simian world," says Michigan's President Alexander Ruthven, "to find college museums aping their big brothers by emphasizing beautiful exhibits on a relatively large scale, but it is difficult by this method to arouse enthusiasm among members of the faculties and administrative boards who see in the college an institution in which study and research are the principal objects. . . . While the emphasizing of exhibits in college museums may carry the department along for a time, particularly if they appeal to one or more men in authority or to an alumnus of considerable influence, the fact that the bulk of opinion among the authorities is generally against this kind of thing dooms the department to failure in the long run." (*A Naturalist in a University Museum*, Ann Arbor, 1931, pages 77–78.)

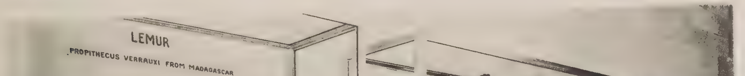
However, campus museums need not be dull. Things that are not large and expensive may nevertheless be interesting and even entertaining. Installations should be refreshing in arrangement and in use of color and light.

Exhibits should be set up, in so far as possible, so that they can be moved easily from exhibition room to classroom or lecture hall. A useful case, with a separate portable top unit, has been designed at the University of Rochester for geology and biology exhibits. The portable section can be unplugged from the electric circuit that lights it, moved on a special small truck, and plugged in again wherever it is used. The portable unit can be adapted to different contents with the aid of false backs and decks. This type of case, refined in exterior lines, deserves to be widely adopted. Portable cases, by the way, lend themselves to rotating installations, and their use might promote the plan of making outlying exhibits in different parts of the campus.

Exhibition cases of standard types—table cases and wall cases, at least—are also essential equipment for many kinds of things. It is economical in the long run to get modern cases with well-constructed metal frames. Light wooden cases are weak, and those with heavy frames are unsightly and inconvenient. No cases should be built in. All equipment should be freely movable.

Reference collections for undergraduate work are exhibits in spirit even though they are not on exhibition as a rule. Such collections should be arranged for use, but they need not be "consumable." If they disappear it means that provision for keeping them is inadequate.

PORTABLE CASES. MUSEUM OF BIOLOGY. UNIVERSITY OF ROCHESTER


LEMUR
PROPITHECUS VERRAUXI FROM MADAGASCAR
THE LEMUR IS THE LOWEST OF THE PRIMATES. THE ANCESTRAL FORMS WHICH BRIDGED THE GAP BETWEEN THE TREE-DWELLING INSECTIVORES AND THE PRIMATE SERIES CULMINATING IN MAN MUST HAVE BEEN LEMUR LIKE
ITS EYES ARE DIRECTED LATERALLY INSTEAD OF FORWARD AS IN OTHER PRIMATES

METAL FRAME CASES MUSEUM OF ZOOLOGY, WELLESLEY COLLEGE

Reference trays, or drawers, may be either open or glazed according to what they contain, and some objects in them may have individual holders. Celluloid tubes and boxes are useful for this purpose. Cupboards under exhibition cases are not entirely satisfactory for the filing of reference trays, although some museums have adopted them. Storage cases with laboratory table tops are better, and are perhaps most serviceable if alternated with exhibition cases in rooms designed for both exhibition and work.

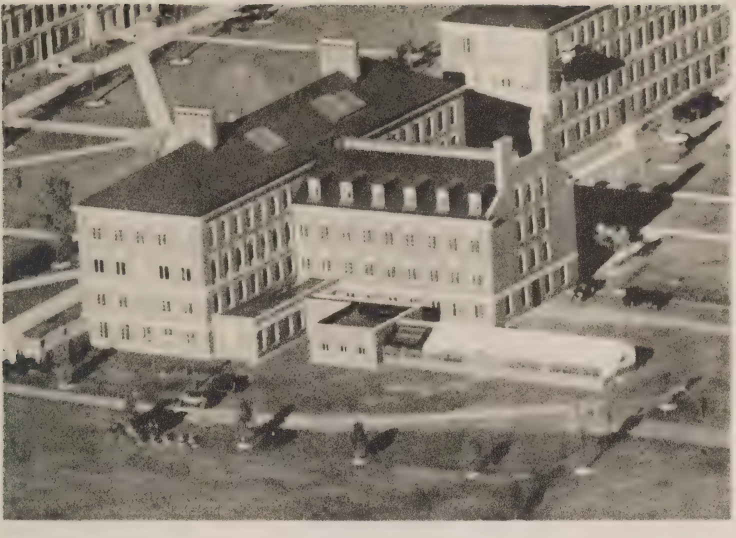
MUSEUM SPACE is an essential part of the quarters of a natural science department. Wherever geology, mineralogy, palaeontology, botany, zoology, or anthropology is taught, arrangements are not complete without provision for collections and exhibits. As much concern should be given to museum space as to arrangements for laboratories and classrooms. In buildings that do not provide properly, remodeling is in order. Something better than a storage place in the basement or an exhibition room in the attic is called for. Certainly a museum room in some other building—in the library, for example—will not do at all.

Separate science museum buildings are considered in the section following; but even where there is such a structure on the campus, additional teaching museums are usually found in the teaching departments themselves. These little museums give evidence of the call for material on the spot.

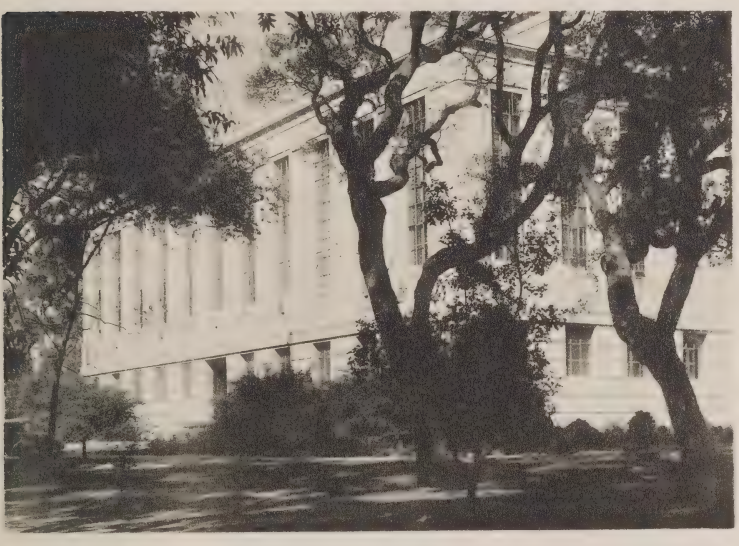
In a building occupied by several natural science departments there are in principle several independent museum-housing problems. Such problems are sometimes dealt with independently by providing rooms here and there;

but experience shows that much the best way is to plan the same type of museum space in each department, and to relate the several spaces architecturally. Thus at Rochester the Chester Dewey Building, occupied by the departments of biology and geology, has on each floor a museum room located in the middle of the building and projecting at the rear in such a way that the several rooms, one above another, form a museum wing; biology has the first floor, and geology the second, and there is a common work room at the top. With only a little adjustment this excellent plan gives a distinct unit including entrance, lobby, and stair shafts—a unit that can be left open at will when other wings are locked. The same plan can be used where right and left parts of the building are occupied by different departments, although Sage Hall of Wellesley, which is so divided, has two ground-floor museums, one on each side. A ground-floor space has certain advantages, including the ease with which exhibition cases and other heavy objects can be got in, but one space does not lend itself to joint use by two or more departments. This can be seen at Hamilton College where the Knox Museum, on the ground floor with the geology department, does well for geology but is little used by the biology department upstairs.

Exhibition rooms should be of sufficient size, flexibility, and serviceability. They should not contain built-in exhibits of architectural ornament, but should provide a simple, neutral setting for museum displays. Flexibility comes largely from having pipes, ducts, radiators, thermostats, and other fixtures placed out of the way, and by not having pilasters, juts, or other irregularities in the walls. Doorways should be in corners, or certainly not in the middle of what would otherwise be useful spaces, and they should have sliding doors if doors are required.



MUSEUMS WING, DEWEY BUILDING UNIVERSITY OF ROCHESTER



MUSEUM OF VERTEBRATE ZOOLOGY UNIVERSITY OF CALIFORNIA

Natural light makes for better working conditions than artificial light, and is much to be preferred in exhibition rooms since these rooms are primarily work spots for students. By use of diffusing glass it is now possible to flood a space with soft daylight from the side—through a band of high windows to minimize reflections and economize wall area. For dark days and evenings there should be indirect artificial lighting of rooms, and for all times, interior lighting of cases.

In many buildings, especially old buildings, that do not provide for exhibits, the scheme of using hallways and lobbies for museum purposes has often been adopted. This arrangement alone is rarely satisfactory, although hallways may be useful in addition to regular museum space as a means of keeping timely exhibits before the eyes of students. Thus in Lyman Hall at Syracuse, which has a whole museum floor at the top of the building, use is made also of spacious common areas on the three lower floors that are occupied severally by the departments of zoology, botany, and geology. In some other buildings, hallways are used for exhibits as part of a preconceived plan. This is seen in the new School of Chemical and Metallurgical Engineering at Purdue, where self-lighted exhibition cases are recessed into the corridor sides of duct walls designed primarily to enclose laboratory pipe lines. Similarly Morrill Hall at Nebraska, with extensive central exhibition space, has also lighted cases set flush with the surface in its corridor walls.

In a university building, museum facilities must include special accommodations for study collections, and they may in fact consist almost wholly of such arrangements. There are many buildings in which laboratories, classrooms, and even hallways have had to bear the brunt of harboring research collections, and some are so crowded that teachers and students make their way about among stacks of trays like rats in a lumber yard. It is very important that suitable working space be planned for museum stacks which, in their realm, correspond to the very needful library stacks in the realm of books. The nature of each individual case sets exact requirements, both as to equipment to hold the particular kind of material, and as to distribution of spaces in the building in relation to the distribution of other rooms for different specialties. All such spaces should be treated as places for work and not as dead storages. They should be lighted by natural light through windows at desk level, as well as artificially.

THE SCIENCE MUSEUM BUILDING has passed through stages that seem to forecast its further development.

For half a century after the Appleton Cabinet was put up at Amherst in 1846, museum buildings were the homes of natural science teaching as well as of curatorial work. But toward the end of the century, when attention turned from the study of collections to experimental work on living forms, laboratory buildings appeared as centers of activity; and campus museums, finding themselves out of the main stream of scientific thought, carried on almost in defiance of the newer interests. By way of compensation for what seemed to be their passing usefulness, the college and university museums turned to public service—following in the ways of public museums that were just beginning their educational efforts at the time. The Dyche Museum (1903) at Kansas, with its elaborate arrangements for popular exhibits (recently remodeled) was a

A CENTRAL MUSEUM BUILDING   UNIVERSITY OF COLORADO MUSEUM

BUILDING OF THE UNIVERSITY MUSEUMS   UNIVERSITY OF MICHIGAN

logical early product of this change. And the idea behind the change persisted and had much to do with shaping some later buildings—ever such recent examples as Vermont's Robert Hull Fleming Museum which was dedicated in 1931 with an address on "The Role of the Modern Museum in the Life of a Community," and the Minnesota Museum of Natural History built in 1940 with the public largely in mind.

Meanwhile, however, the sad gap between museum and laboratory was closing and there were efforts to put laboratory, classroom, and museum under a single roof. In the Amherst College Museum (1908) for the geology and biology departments, now outgrown, this move was made. And other colleges found something of the sort not too hard to achieve. But universities ran into difficulty. Science had spread itself since the early days of museums, and in many places separate departments at least of geology, botany, zoology, and anthropology had come into being. There was too much to reassemble, and some of the universities that put up new buildings for one or another science decided to distribute museum collections and have departmental museums under appropriate different roofs. This happened, most notably, at California and Chicago; and at these and other institutions (including Columbia, Kentucky, Oklahoma, Princeton, Rutgers, and Wisconsin) special museums grew up in older buildings along with the cognate classrooms and laboratories.

Meanwhile Harvard held her great museum intact, although separate teaching departments had been formed in fields it embraces. Yale did likewise, and renewed her allegiance to museum centralization in the new building of 1926 for the Peabody Museum. Michigan in 1928 put up a businesslike structure for the assembled University

Museums at Ann Arbor. And in 1937 Colorado built a consolidated museum covering subjects that had their teaching quarters in three other places.

As between one central and several departmental science museums in the university, the trend is clearly toward the latter arrangement; and this seems to forecast a type of building for each science department that is like the modern fine arts building in principle. Such a department abode has conspicuous exhibits that may make it known as a museum, but in fact it provides also for lecture, class, laboratory, and library work.

The architect may turn for examples to the universities mentioned above, and especially to Chicago where the new home of the Oriental Institute (plans following) is essentially a teaching department building, although it houses a research institute and therefore runs more to study rooms and less to classrooms and large laboratories than would otherwise be the case. In colleges there are some comparable structures—for one, Clark Hall of geology at Williams. Although some public museums may offer a little in the way of suggestion, their example should be followed only with the greatest of caution. A public museum has to be built in large part for crowds of only casually interested people, whereas a college or university museum is above all a work place for students. This specific requirement should bring forth a distinctive type of academic museum embraced in a modern home of science.

ADMINISTRATION AND STAFFING are twin matters. Any museum, though it be only a little teaching unit, requires the special attention and often the unremitting industry of one or more people who are museum workers by inclination and experience. It has been said many times, and with no little truth, that museum people cannot teach and that teachers cannot perform in a museum. Experience shows that museums in the care of teachers who can only teach are almost certain to be consumed by them with the help of students and of insect pests. But also it has been shown that there are many people with abilities in both lines, and that the services of such people, either as museum directors or as curators of museum research collections, can be very advantageous, provided the essential help is made available. Where the right kind of supervision is lacking, no committee or other administrative device, no title, no entry in the catalog, can be of much avail. And where the needed assistance is lacking, any kind of services higher up are brought to naught. As many museums perish through lack of qualified labor as through lack of qualified thought.

We have already discussed the organization of science museums with regard to centralization and decentralization (page 9), but there remains the question of how a museum of either kind is best administered.

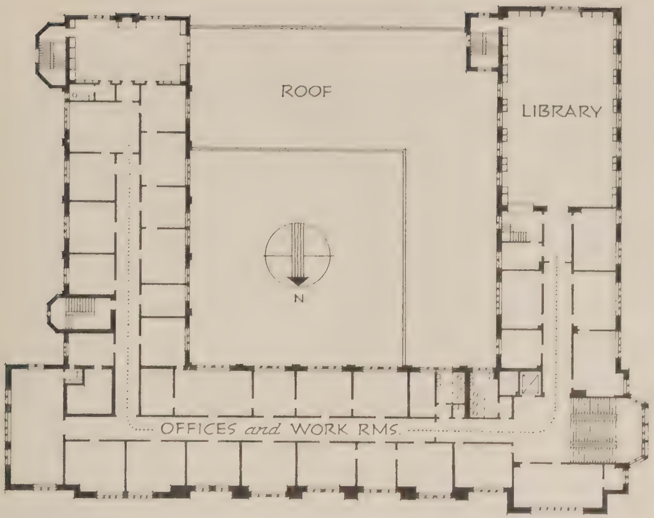
At a university where there are several science departments with their own separate museums, the administrative problem presents itself in essentially the same form to each department. Alexander G. Ruthven has summed up general experience with three plans that have been tried under these and other conditions (*A Naturalist in a University Museum*, Ann Arbor, 1931, pages 84–87). "One plan," he says, "is to have the museum and teaching unit under one head. The head may have two titles, that is, professor or chairman of the teaching department and director or curator of the museum, or he may have only his professorial title, the museum being placed more directly under a member of his teaching staff. The obvious advantage of this type of organization is that the museum becomes readily available for teaching purposes. As revealed by the history of several institutions, the disadvantages of the plan are serious. The tendency of the scheme is to make the museum so subservient to the teaching activities that the collections are damaged or destroyed by class use. Most specimens to be preserved must be expertly handled, which they rarely are under this system. Again, more often than not under this form of organization, the director will be a man who understands neither the scope nor the possibilities of museums with the result that the unit will not prosper. . . . Experience shows that it is usually difficult to explain to a teacher without museum training that museum specimens are to be used but not 'used up.'

"A second method of administration sometimes adopted lies in maintaining entire independence, including separate staffs and budgets. The merits of the plan are that the administrative officers in the museum unit will, more often than under the previous plan, be museum trained persons, for they will be selected with this qualification in view. Because of this fact the collections will probably receive greater protection than under the first scheme and consequently the unit will have more permanency." However, this plan "raises the question of separate advanced degrees and otherwise tends to exaggerate segregation of units. Unfortunate as is this tendency, it is preferable to wrecking the museum. The plan should be adopted when co-operation cannot be secured.

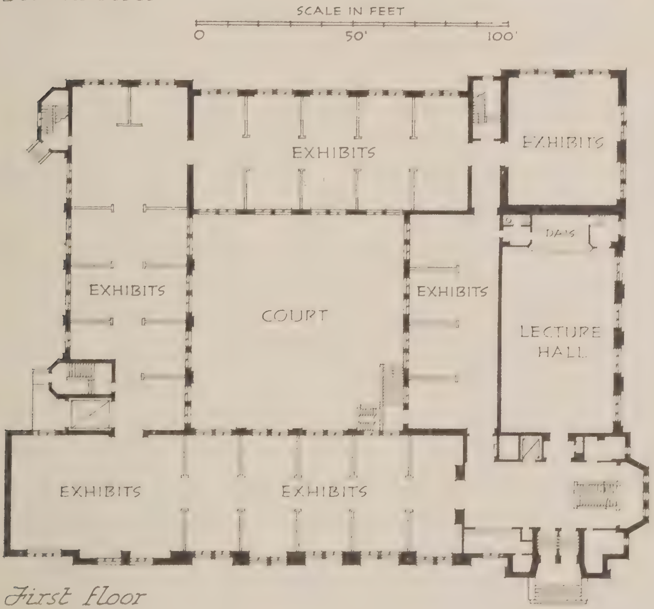
"A third method of organization sets up separate budgets and technical staffs but gives double appointments to museum curators and directors who are interested in teaching and to members of the allied teaching departments

HOME OF THE ORIENTAL INSTITUTE UNIVERSITY OF CHICAGO

EGYPTIAN HALL, ORIENTAL INSTITUTE UNIVERSITY OF CHICAGO



Second floor



First floor

ORIENTAL INSTITUTE UNIVERSITY OF CHICAGO
Mayers, Murray, and Philiips, Architects

whose work requires museum material and the use of museum methods. For such interlocking staffs the salaries may be carried on the budget of the department where the major work is done, on the budget of the teaching department alone, or they may be divided. The desirable features of this arrangement are that the museum may have a staff of experts, teaching and research may be properly centralized, the research may be distributed and the instruction allocated to the teaching department, the museum staff as members of the faculty of the teaching unit may broaden the scope of the latter, and the teaching faculty may have the use of the museum. There would appear to be no serious disadvantages inherent in this plan of organization. It gives the museum the necessary autonomy and recognizes its value as a teaching unit without setting it up as an independent department of instruction."

The recommended dual plan, which gives the museum both autonomy and linkage, is useful not only to separate special museums—example, California's Museum of Palaeontology—but also to museums of wider scope, including centralized museums. At Stanford, the Museum of Natural History, a unit distinct from the biology department, is under a director who is also head of that department; and five curators are also professors or assistant professors. At Colorado, where the University Museum stacks up against the departments of geology, biology, and anthropology, the plan is the same except that the director holds a teaching appointment in only one of these departments and all three departments are closely tied in by means of rotating one-year curatorial appointments, one from each faculty. At Yale the interlocking is less schematic, but the plan is the same. And at Harvard and Michigan (where the centralized museum is made up of loosely joined special museums, each with its own director and all together in one building under a general director) the general director is also head of one component museum as well as a member of the cognate teaching faculty. This limits the functions of the top directorship to what bears upon the building, cooperation between its occupants in keeping house, and general activities such as services to the public. Many of these duties do not exist where museums are scattered on the campus.

The directorship of a university science museum should be a scientific post. The directors of public museums, weighed down with duties of raising money and developing extensive public service, are proverbially administrative officers; but in the university the director of even a great museum need have few of such functions.

College museums may be administered like university museums if they are large enough to have independent standing. Small teaching museums are usually run as department properties, and should be in the care of someone equal to running them well. Each department (usually the departments of geology and biology, sometimes of geology, zoology, botany, and anthropology) has its own responsibility. It is wrong for zoology to dump its museum job on geology, as is sometimes done, even though a geneticist, a histologist, or a protozoologist who is zoology department head may not care a whit about it. There are others, who do need museum collections, to be served. Where two or more museums are under one roof, a joint museum committee may be set up and its members under a chairman may function more or less like the staff of a centralized museum under its director. Where there are several scattered small teaching museums within a college a joint committee might enable them at least to employ a preparator or other assistant between them.

Sometimes it is suggested that by cooperation, whether in college or university, all the *scattered* museums on a campus might be placed under a joint head—a director of museums. This plan sounds practical, but experience is against it. Cooperation may well supply joint helpers, but not so well a floating museum boss.

FINANCES make, or fail to make, the museum. The under-supported museum, getting less than its share, whether that be large or small, is a victim of policy that falls down on something important.

As to how much money museums actually get, reports show college science museums to be receiving up to at least $7,500 a year, and university museums, up to nearly $100,000 a year. In some universities each of several science museums has $15,000 or more a year. Some museums, including the best supported, have special endowments earmarked for their use. Some receive special gifts at intervals from friends. Nearly all get appropriations annually from their parent institutions; and, even though they have other funds, all should be given such appropriations to keep their work in step with other activities. It is difficult to suggest in any general way what resources are necessary, since there are many different conditions; but it is clear that even a small museum to be of much use should have the benefit of one part-time salary for a person in charge and another part-time salary for a helper. There should also be a general fund of a few hundred dollars a year ($1,000 or more if the museum is of much size or is growing or changing). Similarly, even a small university museum requires several salaries, partial or full, and a general fund according to circumstances.

The importance of a separate museum budget, and by inference of accounts to match, has already been urged for art museums. This is an indispensable part of the administrative set-up of any museum; it is a mark of museum work taken to heart.

The practice, sometimes encountered, of not releasing financial information seems needlessly secretive, not to say amateurish. Studies of museum finances cannot be made in the face of this policy, yet comparative figures are wanted everywhere as a basis for planning. It is strongly urged that full information be made available by the treasurer's office, through museum directors, to anyone who has good reason for knowing the facts.

IV

HISTORY MUSEUMS

Academic departments of history are very ready in the use of books and manuscripts, but rarely inclined to pay much heed to museum material. This is a natural consequence of the interest history takes in political affairs, which are mostly recorded on paper, rather than in social history that resides partly in culture objects. Courses in historical method do recognize the importance of artifacts as source and illustrative material, but museum objects themselves rarely have a place in actual course work of this or any other kind.

However, many teachers of history are of the opinion that historical collections will come into more and more use in colleges and universities. Giving closer consideration to the history of how people have lived, as revealed in culture material, will take added time and will draw the historian into a world with which as a rule he is none too familiar. But this has been the way with other improvements in teaching, and history teachers are equal to the change.

BEGINNINGS of teaching collections in history are already to be found here and there, usually in the form of files of historical prints, photographs, or lantern slides showing general scenes, houses, furniture, costume, or other features of the past. There are also some small collections of American antiques, and a few miscellaneous collections that are hardly more than signs of good intentions on the part of enterprising teachers.

However, an already marked museum development in history departments is the use of material borrowed from the art museum. This represents the use of art objects for their subject content in the visualizing of knowledge, and to some extent for portrayal of the spirit of other times. We have noted this above, in discussing art museums (page 26).

SPECIAL COLLECTIONS—local, or regional, or biographic, or pertaining to the history of science, engineering, agriculture, the theatre, the church, or some other field of action—are found in about a score of institutions. Several Confederate collections, the Stephen Collins Foster Memorial collection at Pittsburgh, the Edgar Fahs Smith Memorial collection on the history of chemistry at Pennsylvania, the Brander Matthews Dramatic Museum at Columbia, and the Jewish Theological Seminary Museum in New York, are good examples of this class. Such special units, with apparently only one important exception, are not adjuncts of history departments, but are under some other appropriate department or school, or are set up by themselves within the institution. The special collection that is connected with history teaching is the Historical Museum of Louisiana State University, which has material on Louisiana during the Civil War.

Special collections should become increasingly useful to history departments, particularly to those departments already embarked on museum work through the use of objects and temporary exhibitions borrowed from the art museum on the campus.

ACCIDENTALS, or collections that happen to be where they are for no better reason than that someone presented them, are historical more often than of any other kind. An accidental art or science collection has a good chance of falling into the hands of the art or science department, to be weeded and used, or thrown out. But history collections have nowhere to go as a rule, so they settle down just anywhere and in time may come to have squatter's rights. All such stuff should be viewed with a very baleful eye.

But this does not cast aspersion on Alma Mater's real keepsakes. The institution's own memorabilia deserve to be given some dignified resting place or places on the campus, but not in a campus museum.

V

COURSES ON MUSEUM WORK

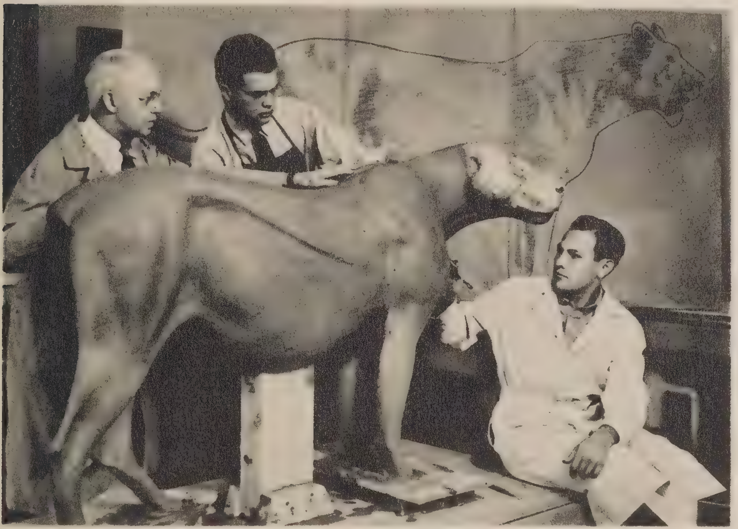
The growing importance of museum work as a calling has led some of the universities to give vocational courses in this field. Museums have a hand in this, although the work is actually given by art and science departments.

COURSES ARE OFFERED on the art side at Harvard, Yale, Chicago, Wisconsin, Minnesota, and New York University; on the science side at California, Iowa, and Michigan; and on the history side at Columbia. These courses embrace as much as they can of what their sponsors believe a museum director's preparation ought to be. Less inclusive, but offering some training in special branches of museum work, are parts of several courses on research techniques—in palaeontology at Princeton, in zoology at Washington, in botany at Syracuse, in anthropology at Chicago. All these courses are primarily for graduate students, and young people have gone out from them to executive and other posts in more than a hundred museums.

Several colleges also give some special preparation for museum work; but this seems out of place. The college has more than it can do to provide a liberal education; and a liberal education is the first requirement for any museum career.

It will be noted that the university courses are not confined to state institutions, but appear in places where there

"HORSE IN ART" EXHIBITION BY MUSEUM CLASS, FOGG ART MUSEUM



STUDENT WORK IN A MUSEUM COURSE STATE UNIVERSITY OF IOWA

are strong museums. Harvard and Yale, with the leading art museum training courses, both have important art museums that are closely in touch with the whole museum field and with wealthy collectors, some of them alumni, who support museums. To be sure, the principal courses for science museum work are at state universities, but these too are found where there are active museums. In the past, training for the neighboring field of librarianship has become established in universities through the interest of strong university libraries; and similarly, preparation for museum work will doubtless continue to take shape where university museums are strong, without much regard to differences in educational thought that have led the younger tax-supported universities toward vocational work while the older endowed universities have hewed closer to strictly cultural lines.

THE PREPARATION NEEDED for museum work is a matter involving differences of opinion. Some people hold that technique is the thing; and this view is responsible for practical training in methods of doing the job, as seen at Iowa where the science museum courses are devoted largely to taxidermy and the skills of exhibition. However, others believe that what a science museum director or worker needs is to know science, and what an art museum director or worker needs is to know art. This position does not favor special vocational courses. But among those who lean to this side are some who hold that the prospective museum worker should season his science or art with special study of museum collections, as seen at Harvard where the art museum course is devoted largely to problems of art collecting.

All courses necessarily suffer from shortness of time. If several years could be given to museum training, while the student is gaining what mastery he can of his chosen field of knowledge, there would be opportunity for attention to all approaches. But as it is now, with usually no more than a year of special study along with other work, the most that can be done is to get the student started in the right direction. This makes the teacher's view-point all the more important.

What, then, is best?

For one thing, it seems clear that emphasis in the university should be placed on knowledge rather than on skill. From a background of understanding, skill can be developed through experience; but skill without knowledge is empty. It seems hardly fair to the student to give a great deal of time to technique—whether of administration, exhibition, or education—especially now that public museums are beginning to offer apprenticeships, or interneships, calculated to bestow a condensed practical experience upon well-educated beginners in museum work.

The university's task is to educate, not to train. Or if this goes too far for the advocates of vocational training, then at least the university's duty is to put education above training in any preparation such as that for museum work. However, this does not mean that preparation in the subject matter of art or science wholly fills the bill, and that special museum courses are therefore unnecessary. What it does mean is that special preparation—added to the required preparation in art or science—should give knowledge of museums and museum work, rather than skill in museum methods. There is an ever enlarging body of professional knowledge relating to the museum as a distinct type of institution with its own aims and its own forms and procedures that are modified under different conditions to meet different needs. These matters are set forth in an extensive literature that deserves to be studied well, unmixed with considerations of scientific taxonomy, art history and criticism, research methods, or anything else pertaining to science or art rather than to the subject of museums.

Another thing that should be taken account of in any museum course is a weakness conspicuous in the ranks of museum workers. This is insularity. For many years museums have been held back, and still are, by cleavages between thought-tight compartments—between the provinces of art museum workers and of science museum workers, between the spheres of directors and of curators and of instructors. There is a need for museum workers of broad professional outlook who will strive toward closing these gaps.

Courses, as given now, are not enough addressed to this serious problem. In fact, some courses actually tend to preserve existing gaps by turning out well-fortified members of one or another clique. Part of this difficulty would yield to the introduction of science museum considerations into art museum courses, and vice versa. Another part would be overcome if prospective directors were taught to be real directors and not preparators, or curators of mammals or of paintings.

The university student of museum problems ordinarily needs to gather in courses from different departments or schools that do not go together as requirements for a degree. He may desire selections from such diverse fields as sociology, economics, psychology, education, history, and science if he is an art student or art if he is a science student. This forms an administrative task for the university: to bring scattered electives within reach of the student who should have them. Perhaps in some institutions a solution may be found for the prospective museum worker by recognizing a faculty group made up of teachers whose subjects converge on museum interests, and giving this group effect as a museum school without actually setting it up as such. This would leave the granting of degrees where it should be, namely, with the art and science faculties. In time the history faculty might have a part in the program.

For advanced students who are not primarily concerned with getting a degree, Yale University has a very helpful plan that deserves to be introduced elsewhere. Yale's Division of General Studies, formed in 1935, offers the resources of the Graduate School to students whose individual needs cut across department lines; and in this way it gives special students a regular place and needed guidance. Also a number of fellowships have been provided for men and women taking university work while on leave from positions in museums, libraries, and schools to which they will return. Under this arrangement one art museum worker took courses in art and drama, along with museography and a seminar course on education; and a science museum worker took up work in art.

University preparation for museum work is still in its beginnings, but it is developing steadily. New courses appear almost every year. More students are enrolled as more openings appear in museums. Everything points to a time when a constant stream of young people with thoroughly professional preparation will go out from the universities to a museum field that is ready to receive them.

Museums and the museum profession must develop together; and the university can do important work in furthering growth on both sides. In the future, close attention might well be given to providing leaders for museums of special types such as the very large class of historic house museums now numbering nearly 700, the new class of science museums in state and national parks, and college and university museums themselves. Among the 2500 museums of all kinds in this country there are hundreds of worthy careers standing ready to open as fast as there are men and women capable of taking little institutions in early stages and building them up.

Meanwhile every college, every university has the work of creating and maintaining good museums of its own as tools for its teaching and research.

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